

Notice of Allowability

Application No.

10/050,078

Applicant(s)

OKUMURA, TOSHIYUKI

Examiner

Cornelius H. Jackson

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 18 April 2005.
2. ☒ The allowed claim(s) is/are 19,22-24,30,37-41 and 59.
3. ☒ The drawings filed on 17 January 2002 and 18 April 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 2/16/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Arguments

1. Acknowledgment is made that applicant's Amendment, filed on 18 April 2005, has been entered. Upon entrance of the Amendment, claims 34-36, 42-58 and 60 were canceled. Claims 19, 22-24, 30, 37-41 and 59 are now pending in the current application.

Drawings

2. The drawings were received on 18 April 2005. These drawings are accepted by the Examiner.

Allowable Subject Matter

3. Claims 19, 22-24, 30, 37-41 and 59 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:
- Regarding claims 22-24, prior art fails to disclose, teach, or suggest, alone or in combination, a gallium nitride semiconductor device as claimed having cladding layer with a ridge surface and a planar surface and an active layer containing two to four quantum well layers and one to three barrier layers respectively, each interposed

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between the quantum well layers, and the one or each barrier layer has a layer thickness of 4 nm or less.

Regarding claims 19 and 30, prior art fails to disclose, teach, or suggest, alone or in combination, a gallium nitride semiconductor device as claimed being a self-oscillating semiconductor laser device, **see specification, page 26, lines 3-10**, and having an active layer containing two to four quantum well layers and one to three barrier layers respectively, each interposed between the quantum well layers, and the one or each barrier layer has a layer thickness of 4 nm or less.

Regarding claim 59, prior art fails to disclose, teach, or suggest, alone or in combination, a gallium nitride semiconductor device as claimed having a p-type cladding layer that forms at least part of a ridge structure and an active layer containing two to four quantum well layers and one to three barrier layers respectively, each interposed between the quantum well layers, and the one or each barrier layer has a layer thickness of 4 nm or less.

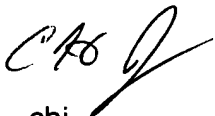
Conclusion

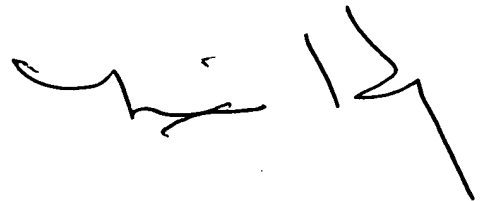
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (571)272-1942. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MinSun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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**MINSUN OH HARVEY
PRIMARY EXAMINER**